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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,078	08/19/2003	Isao Nakazawa	122.1563	3056

21171 7590 06/01/2006

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EXAMINER

NGUYEN, DAVID Q

ART UNIT PAPER NUMBER

2617

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/643,078	<b>Applicant(s)</b> NAKAZAWA ET AL.	
	<b>Examiner</b> David Q. Nguyen	<b>Art Unit</b> 2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities:

Claim structure does not follow USPTO standard format. The claim is unclear.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is not clear.

What is based on nonlinear distortion influenced by all wireless lines in the area?

What is expressed by an intercept point input level (IIP)?

Does the line quality characteristic evaluation system for a wireless communication line comprise a reception equivalent band limitation expressed by attenuation of the intercept point input level (IIP)?

Does the line quality characteristic evaluation system for a wireless communication line comprise reception side thermal noise of the wireless communication lines, and leakage power from other interfering wireless lines leaking into the reception equivalent band?

Claims 2-4 depend on claim 1. Therefore, they are rejected.

Art Unit: 2681

3. Claim 1 is suggested to rewrite as understood by Examiner as follow:

A line quality characteristic evaluation system for a wireless communication line comprising:

a line quality estimating means estimating a line quality of the wireless communication line under nonlinear interference wireless lines in an area in which wireless lines for wireless communication by digital signals sharing space and other wireless lines interfering with the wireless lines are present together,

wherein said estimating the line quality of the wireless communication line is based on nonlinear distortion influenced by all wireless lines in the area, said nonlinear distortion is expressed by an intercept point input level (IIP),

wherein said estimating the line quality of the wireless communication line is based on a reception equivalent band limitation expressed by attenuation of the intercept point input level (IIP),

wherein said estimating the line quality of the wireless communication line is based on reception side thermal noise of the wireless communication lines,

and wherein said estimating the line quality of the wireless communication line is based on said leakage power from other interfering wireless lines leaking into the reception equivalent band.

***Allowable Subject Matter***

4. Claims 1-4 would be allowable if rewritten or amended <sup>exactly</sup> as Examiner's <sup>has</sup> suggestion <sup>ed</sup> above to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

*JT* 5/26/06

Art Unit: 2681

*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q. Nguyen whose telephone number is 571-272-7844. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOSEPH H. FEILD can be reached on (571)272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
David Nguyen

  
JOSEPH FEILD  
SUPERVISORY PATENT EXAMINER